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#### RESEARCH PAPER

# Students' Insights about the Influence of Text Messaging on Academic Writing Skills

<sup>1</sup> Azhar Ahmad\* <sup>2</sup> Dr. Perveen Akhter Farhat <sup>3</sup>Samia Maqbool Choudhary

- 1. M. Phil English Linguistics, Department of English Lahore Leads University, Lahore, Punjab, Pakistan
- 2. Assistant Professor, Department of English Lahore Leads University, Lahore, Punjab, Pakistan
- 3. M. Phil English Linguistics, Department of English Lahore Leads University, Lahore, Punjab, Pakistan

\*Corresponding Author

azharscholar313@gmail.com

## **ABSTRACT**

The aim of present study was to find out the students' insights about the influence of text messaging on their academic writing skills. To complete this task the researchers employed cross sectional survey and adopted both qualitative and quantitative methods. An online questionnaire was developed to collect data. The population of the study was 10 universities of Gujranwala Division and the participants were both male and female students at graduate level. The sample size was 250 and sample technique was random. The data was collected by sending online link of the questionnaire through WhatsApp and email. Out of 250, 200 responses were received. Frequency and thematic analysis techniques were employed to analyze the collected data. The findings of the present study exposed that text messaging have influence on their academic writing skills. It was also revealed by the participants that they could save time and their habits force them to use short forms of text messaging in their academic writing.

**KEYWORDS** 

Academic Writing, Short-forms Writings, Standard English, Students Insights, Text-Messaging

# Introduction

Text messaging has developed as a general instrument of communication in the contemporary social order, the principal source of communication for maximum persons is text messaging, and to make text messaging comfortable, several individuals adopt easy method and they type short forms in text messaging, but they are unaware about the bad influence of short forms on sentence structure. Students use phones and laptops at every place in traveling, at homes, at colleges, universities, and classrooms. Therefore, in this context they make silent conversations with the people on the other ends of conversations. Text messaging gives students an opportunity to carry on silent conversation (Katz & Aakhus, 2002). They accomplish this task by texting messages. Thus, text messaging becomes a way of communication with others and students make it as quick and easy and they write messages in very short and abbreviated forms so that they could avoid writing extra spellings. Crystal (2008) says texters are habitual to skip spellings either intentionally or unintentionally. They write the word 'cuz' for because and 'gr8' for great and writing in short forms is leading them to non-standardized English writing.

Vosloo (2009) criticized text messaging and regarded it a basic reason, which is decaying language and deteriorating spellings. They write these abbreviated forms even in their assignments and exams which frustrate the readers. It is generally said that excessive use of abbreviated forms in text messages is damaging the students' writing skills and leading them to the poor English language literacy especially in crafting non-standardized English (Vosloo, 2009). Our new generation is using text messaging as a part of their lifecycle. New researches disclosed that there are seven hundred million persons using text messaging just on WhatsApp (Kim, 2015). Students cannot restrain themselves from text

messaging for a minute even when they are at university campuses or college campus (Nyarko, 2018). Text messaging generates negative influence on academic writing and leads to writing errors. This is why the researchers attempt to highlight this issue during text messaging and suggest some solutions at the end of the paper. The present study investigates the insights of the graduate level students of universities campuses of Gujranwala division about the influence of text messaging on their academic writing skills.

#### **Literature Review**

Al-Sa'di and Hamdan (2005) studied the language structures of electronic English, in their study, the results showed that the mainstream of the texters used simple and short sentences for example using one letter for a complete term. Crystal (2008) views that, text messaging does not have negative influence on English language. He says that usage of abbreviations is not a new and it is not students' habit to use these shortenings in their assignments and exams. Russell (2010) studies language of Short Message Service (SMS) as a self directed and an innovative language. He says that students necessarily learn the fundamentals of English language. Dansieh (2011) noted that majority of individuals in the universal are using mobile phones therefore they cannot forbid themselves from text messaging and it has become an essential part of their community. Omar and Miah (2012) directed a study in the United States of America on influences of technology on writing skills of teenagers. They found that technologies have bad effect and damaging writing skills of teen agers. Oluga and Babolola (2013) see the damaging influence of textism on the writings of the Nigerian students because they unintentionally use short form language of text messages in their academic writing. Odey, Essoh and Endong (2014) exposed that text messaging is a risk for standard written English spellings.

# The increase of Text Messaging

Text messaging, is a popular method of communication in the contemporary age. The conversations have become more effective through advancements in technology in the shapes of different devices since 1990 (Tallvid, 2015). The language written in text messages, considered of short forms as acronyms, abbreviations, and symbols etc. is called textism. On the other hand, the transferring of short text messages by electronic means particularly from one mobile phone to another mobile phone is named as text messaging. Most students either at home or campus are in the habit to communicate through text messages. These systems are fast and no grammatical rules are followed by the users. The language used in messages is called text messaging (Farina, 2011) and contains; use of short forms (bcs for because), use of clippings (comin for coming), use of homophones (18r for later or letter), use of symbols (&, :-), @), to spell in an informal way (fyn), pronunciation stylization (cul), and skipping apostrophes (dont, havent) (Wood, Plester & Bowyer 2009). Rafi (2010) stated that, text messaging in Pakistani setting neglects the syntactical rules of language and students' writings mirror these errors due to their extreme usage of texting in daily life.

# The Significant of Academic Writing

Among the four skills of language, writing is a significant and productive skill, and the academic writing is one of the important features of English as Second Language. However, the writing skill is on the second place as an instrument for communication, but it is much significant particularly in the academic zone, and is widely used in education and publications. All the four skills are required to become a proficient user of English language. However, emphasis might differ due to the certain situations. In Pakistani context, students in colleges and universities face a lot of problems to write in English and all of this is due to weak foundation and lack of grammatical competence (Shafie, Darus, & Osman, 2010). Fundamentally, restlessness as well as fear arise due to lack of knowledge about grammar and sentence structure and block their ideas and content. So, these incompetencies develop

their fear and lead them to produce very defective writing in exams and assignments etc. However, writing is hard task to master but it has significant qualities which help in everyday conversation.

# Students' insights towards use of Text Messaging

Sending text messages in place of calling has developed as a tendency particularly in youths and students. Froese, Carpenter, Inman, Schooley, Barnes, Brecht, and Chacon (2012) held a survey and studied the influence of using mobile phones in classrooms. Majority of the students acknowledged that they were in the habit of using mobile phones during lectures. They also acknowledged that their performance could upsurge if they didn't use mobile phones in classrooms. Yousaf and Ahmed (2013) conducted research to investigate the influence of the Short Message Service (SMS) using tendencies on composing aptitudes of under studies of Pakistan and to demonstrate how it is influencing their composing abilities. It was reasoned that the presentation to the Short Message Service (SMS), was negatively affecting the composing aptitudes of the learners. The unnecessary use of text messaging is driving under studies towards composing incorrect spellings and using Short Message Service (SMS) language short contractions; which are not standard in assessments and day by day hurting academic work. Janin-Starr (2014) studied association among text messaging and learners writing. He examined lecturers and students' opinions about influence of text messaging on writings. The information was gathered through face to face interviews from 10 lecturers and 10 students and 105 by online survey. The consequences of this study disclosed that text messaging and writing skills has no relation with each other.

#### **Material and Methods**

The research methodology is the procedure which is used by the researchers to gather data for resolving problems of investigation. In this part of article, the research methods which were used by the researchers to achieve the research objectives of this study are discussed, the research design, the sampling technique, the population of this study, the research instrument, and the data collection process which were used for data analysis are also mentioned. The research questions of the present study are answered by using this research methodology.

# **Research Design**

Design of the research comprises of the whole procedure which is conducted research. Myers, Well, and Lorch (2010) stated that design of the research is the strategy to conduct the research by using dissimilar variables. The researchers used mixed methods data collection technique to collect the quantitative and qualitative data for the accomplishment of this research work. The quantitative method gives numerical data for the mathematical analysis as Babbie (2010) defines that data analysis is done through objective measurements and the geometric or mathematical investigation of the composed data through the questionnaire survey by using computational procedures. On the other hand, the qualitative method was used to get a deeper perception of the situation. DeFranzo (2011) describes it as qualitative research which provides insights into the problem to progress ideas and suppositions for possible quantitative research. Mixed method approach was applied in the current research to investigate the students' perception about using text messaging and its influence on their academic writing skills.

# **Population and Sampling**

The population selected for this study was 10 universities of Gujranwala Division which is situated in Punjab Pakistan. Gujranwala division comprises six districts as Sialkot, Narowal, Gujrat, Mandi Bhawaldin, Hafizabad, and Gujranwala. The participants were both

male and female students at graduate level. The selected 10 universities of Gujranwala division were as Gift University Gujranwala, Punjab University Gujranwala Campus, University of Sargodha Gujranwala Campus, University of Sialkot main campus, Government College Women University Sialkot, University of Management and Technology Sialkot Campus, Grand Asian University Sialkot, University of Gujrat, University of Lahore Gujrat Campus, and University of Narowal. The sample size was 250 students and nearly 200 students responded to the questionnaire. The sample selection was random to ensure the generalization of results to the population of this study. The sample size and sampling techniques were same as of the Nyarko's in 2018 investigating the influence of instant messaging applications on writing skills of English as a second language.

#### **Research Instrument**

This study employed an online questionnaire as a tool to collect data. The questionnaire comprised of three parts, as Part A contained the demographic information about the participants which included items about the gender, frequency of text messaging, preference of applications for sending and receiving messages, etc. In Part B, the researcher developed seven Likert scale items (strongly agree, agree, neutral, disagree and strongly disagree) to collect quantitative data for this present study. Part C of the questionnaire contains two open ended questions that were adapted from the study of Herizi & Mahieddine (2019). To collect qualitative data for this present study all items were developed by the researchers themselves.

# **Data Analysis Techniques**

This study investigated to find out the graduate level students' insights about the influence of text messaging on their academic writing skills and the use of text messaging language in their academic writings. For the accomplishment of this task two data analysis techniques were employed. On one hand, to get accurate and exact percentage about the participants' gender, and other demographic information, frequency analysis was employed. The same technique of frequency analysis was used to analyze the responses about the influence of text messaging and use of abbreviations in students' formal writing for the Likert scale items. On the other hand, for deeper insight about students' responses in open ended items, thematic analysis was employed to analyze insights of students about the influence of text messaging on their writing skills in qualitative data. For these purposes, the extracts of repeatedly given statements were taken and changed into codes. These codes were changed into minor themes and finally from those minor themes, major themes were developed. Moreover, it analyzed the main causes that led the students to use abbreviations, acronyms and short forms in their academic writings.

#### **Results and Discussion**

This section of article deals with data analysis techniques that were employed by the researcher to generate results, and it includes the frequency analysis in which the demographic statistics and the statistics of students' insights have been shown. Furthermore, it includes the thematic analysis of qualitative data, and discussion about the results of the present study. To analyze quantitative data, descriptive statistics technique was employed to show the frequency analysis. On the other hand, thematic analysis technique was used to analyze qualitative data. The locality of this research contributors was not asked in the questionnaire, but graduate level students studying in Gujranwala division universities campuses belonged from all over the Pakistan including urban and rural areas of different cities of Pakistan.

Part A of the questionnaire comprises three questions, gender of the participants, the frequency of students' often uses for text messaging, and students' favorite application are presented in the figures below:

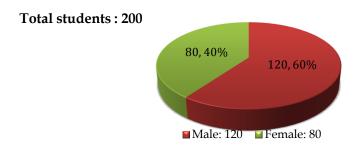


Figure: 01 Gender of the participants

Figure 1 shows the descriptive statistics of the sample that there, were total 200 respondents out of them 80 respondents were female students and 120 respondents were male students. All the students were of graduate level from Gujranwala division universities campuses.

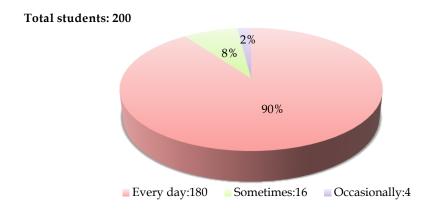


Figure: 02 Students' often use text messaging

Figure 2 presents the frequency of students' text messaging, as they were asked whether how many text messages they send and receive on daily basis, occasionally or sometimes. From the total 200 respondents; which were graduate level students, 180 (90%) students replied that they send and receive text messages every day while 4 (02%) said that they send and receive messages occasionally and 16 (08%) students replied that they send and receive text messages sometimes.

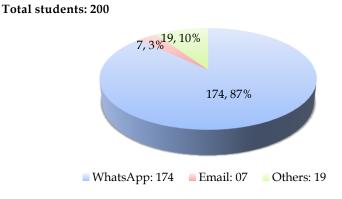


Figure: 03 Students' favorite application

Figure 3 shows the results of the students' favorite application which they prefer to use for text messaging. From the total 200 respondents 7 respondents which were 3% of the total students said they prefer Email, while 174 respondents which were 87% percent of total said they prefer to use WhatsApp as their favorite application for text messaging, and 19 respondents which were 10% percent of total students said they prefer to use other applications to send and receive messages.

In part B, the data gathered for seven likert scale items (strongly agree, agree, neutral, disagree and strongly disagree) is analyzed in the tables 01 to 07 blew.

Table 1
Students' contact through text messaging or not

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	30	35.3%	35.3%	35.3%
	Agree	153	180.0%	180.0%	215.3%
	Neutral	15	17.6%	17.6%	232.9%
	Disagree	2	2.4%	2.4%	235.3%
	Strongly disagree	0	0.0%	0.0%	235.0%
	Total	200	100.0%	100.0%	

Table 1 shows the results about the graduate level students' insights whether they contact through text messaging or not. The results in the above table illustrates that 30 (35.3%) students strongly agreed, and 153 (180.0%) agreed to the statement. On the other side, 2 students which were 2.4% percent of total respondents were disagreed, while no student was strongly disagreed to the statement and 15 (17.6%) students remained neutral.

Table 2
The text messaging effects academic writing skill

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	29	34.1 %	34.1 %	34.1 %
`	Agree	137	161.2 %	161.2 %	195.3 %
	Neutral	21	24.7%	24.7%	231.8%
	Disagree	10	11.8%	11.8%	235%
	Strongly disagree	3	3.5%	3.5%	100%
	Total	200	100%	100%	

Table 2 presents the results related to the insights of graduate level students about the effect of text messaging on academic writing skills. It was found that  $29 \, (34.1\%)$  students strongly agreed and  $137 \, (161.2\%)$  students agreed to the statement which means 195.3% students said that there is effect of text messaging on academic writing. On the other side,  $10 \, (11.8\%)$  students disagreed and  $3 \, (3.5\%)$  students strongly disagreed while  $10 \, \text{students}$  were ambiguous about it.

Table 3
Students' use of abbreviations acronyms and short forms in text messaging

		Fraguancy	Dorcont	Valid	Cumulative
		rrequency	Frequency Percent		Percent
Valid	Strongly agree	27	31.8%	31.8%	31.8%
	Agree	133	156.5 %	156.5 %	188.2%
	Neutral	21	24.7%	24.7%	212.9%
	Disagree	13	15.3%	15.3%	228.2%
	Strongly disagree	6	7.1%	7.1%	235%

Total	200	100%	100%

Table 3 presents the results related to the insights of students about the use of abbreviations acronyms and short forms in text messaging. It was found that 27 students which were 38.8% percent of total were strongly agreed and 133 students which were 156.5% percent of total students were agreed to the statement which means 188.7% students said that they use abbreviations and acronyms in text messages. On the other side, 13 (15.3%) students disagreed and 6 (7.1%) students strongly disagreed while 21 students were ambiguous about it

Table 4
Text messaging is damaging for students' writing skills

		Frequenc Borgant		Valid	Cumulative
		$\mathbf{y}$	Percent	Percent	Percent
Valid	Strongly agree	55	64.7%	64.7%	64.7%
	Agree	115	123.5%	123.5%	188.2%
	Neutral	18	21.2%	21.2%	209.4%
	Disagree	15	17.6%	17.6%	227.1%
	Strongly disagree	7	8.2%	8.2%	235%
	Total	200	100%	100%	

Table 4 shows the results related to the students' insights that text messaging has damaged their writing skill. The results show that 55 (64.7%) students strongly agreed and 115 (123.5%) agreed that text messaging has damaged their writing skill whereas 15 (17.6%) students disagreed and 7 (8.2%) students strongly disagreed to the statement. On the other hand, 18 (17.6%) students remained neutral.

Table 5
Students face problems in assignments and exams due to text messaging

beddenes are problems in assignments and exams are to text messaging					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	47	55.3%	55.3%	55.3%
	Agree	97	114.1%	114.1%	169.4%
	Neutral	30	35.3%	35.3%	204.7%
	Disagree	21	24.7%	24.7%	229.4%
	Strongly disagree	5	5.9%	5.9%	235%
	Total	200	100%	100%	

Table 5 presents the results related to the insights of students about the problems faced by them in their assignments and exams due to text messaging. It was found that 47 (55.3%) students strongly agreed and maximum 97 (114.1%) students agreed. On the other side, 21 (24.7%) students disagreed and 5 (5.9%) students strongly disagreed while 30 (35.3%) students were ambiguous about the statement.

Table 6
Text messaging will endanger the future of standard English.

	Text messaging will endanger the future of standard English.						
		Frequenc	Percent	Valid	Cumulative		
		У	rercent	Percent	Percent		
Valid	Strongly agree	63	74.1%	74.1%	74.1%		
	Agree	104	122.4%	122.4%	196.5%		
	Neutral	22	25.9%	25.9%	222.4%		

Disagree	10	11.8%	11.8%	234.1%
Strongly disagree	1	1.2%	1.2%	235%
Total	200	100%	100%	

The results presented above in the table number 6 these results are related to the question that; the text messaging will endanger the future of standard English. From the results it was found that 63 (74.1%) students were strongly agreed and the mainstream of students as 104 students which were (122.4%) percent of total students were agreed to the statement. On the other side, 10 students which were (11.8%) percent of total students disagreed and 1 (1.2%) student strongly disagreed while 22 (25.9%) students were ambiguous about the statement.

Table 7
Text messaging progresses students' standard English and academic writing.

Text messaging progresses students standard English and academic writing.						
		Frequency	Frequency Percent		Cumulative	
		rrequency	rercent	Percent	Percent	
Valid	Strongly agree	10	11.8%	11.8%	11.8%	
	Agree	48	56.5%	56.5%	68.2%	
	Neutral	42	49.4%	49.4%	117.6%	
	Disagree	76	89.4%	89.4%	207.1%	
	Strongly disagree	24	28.2%	28.2%	235%	
	Total	200	100%	100%		

The table number 7 indicates that the consequences related to the question that; text messaging progresses students' standard English and academic writing. It was found that  $10 \ (11.8\%)$  students were strongly agreed and  $48 \ (56.5\%)$  students agreed. On the other side,  $76 \ (89.4\%)$  students disagreed and  $24 \ (28.2\%)$  students strongly disagreed while  $42 \ (49.4\%)$  students were ambiguous about the statement.

Part C of the questionnaire contains two open ended questions the collected data is analyzed in the table eight and table nine below.

Table 8
The Influence of Text Messaging on academic writing skills

The influence of Text Messaging on academic writing skills							
Extracts from students' responses	Codes	Minor Themes	Major Themes				
-	Lack of attention	The Negative influence					
<ul> <li>It damages students' skill of</li> </ul>	Incorrect	of					
memorizing spellings.	Grammar	text					
• It has a bad influence on		messaging.					
grammar and it makes them	Incorrect						
write incorrect grammar.	Grammar						
<ul> <li>Students forget spellings due to</li> </ul>			The influence of				
the influence of text messaging.	Less		text messaging				
• It stops students' practice for	Creativity		on students'				
formal writing, it discourages			academic writing				
creative writing, and it creates			skills.				
problems for students in							
academic writing.							
It helps to avoid repetition and	Students'						
these forms are short and easy.	Ease	The positive					
• It saves their time and are easy to		influence					
keep in mind.		of					
<ul> <li>It enhances their vocabulary.</li> </ul>		text					
<ul> <li>It improves their self-writing.</li> </ul>	Improvement in	messaging.					
	writing						

Table 8 displays the abstracts from the students' replies, codes given to the replies and themes. The 200 partakers were asked whether text messaging influences their academic writing skills or not. In response to this question, 87 students replied that text messaging has no influence on students' academic writing skills while 113 agreed that it has an influence on academic writing skills. The students who agreed that text messaging has an influence on academic writing skills were asked to explain their answers by giving reasons according to their insights. Their responses were read and examined. After reading the responses, the abstracts of given declarations were taken and were characterized into 6 codes; Lack of attention, incorrect grammar, less creativity, students' ease, and improvement in academic writing. The first four codes revealed the negative influence of text messaging and the last two codes revealed the positive impact of text messaging. These codes led us to the two minor themes as the negative influence of text messaging, and the positive influence of text messaging on academic writing skills. These two minor themes at the end exposed the major theme that was the influence of text messaging on academic writing skills.

Table 9
Causes of Use of Abbreviations and Short Forms in Assignments and Examinations

Extracts from students' responses	Codes	Minor Themes	Major Themes
<ul> <li>They use abbreviation in academic writing because they use them in text messaging frequently.</li> <li>Due to influence of text</li> </ul>	Text messaging influence	Use of abbreviations due to influence of text messaging.	Causes of
<ul><li>messaging language.</li><li>To convey things in short</li></ul>	Habits	Use of abbreviations	use of abbreviations
<ul><li>words.</li><li>Because of shortage of time.</li></ul>	Time force	due to students' habits.	and shortforms.
<ul> <li>To overcome the errors of spellings.</li> </ul>	Convenience		
<ul> <li>Without knowing that they are using short forms in academic writing.</li> </ul>	Unintentionally	Use of abbreviations Unintentionally.	

Table 9 exhibits that the students were asked to give reasons of use of abbreviations and short forms in assignments and examinations. In response to it; sixty-nine (69) students, including those students, who didn't give any reply said that they never used any kind short forms or abbreviations in their academic writing; while (131) students gave different reasons according to their own observations, why they use these short and abbreviated forms in their academic writing. The students' responses were read and analyzed. After reading the responses, the extracts of repeatedly given statements were taken. These responses were categorized into five codes; Text messaging influence Habits of students, time force, convenience of students, unintentionally. These codes revealed three minor themes use of abbreviations due to influence of text messaging, use of abbreviations due to students' habits, use of abbreviations unintentionally, and finally these three minor themes revealed the major theme causes of use of abbreviations and shortforms. These results stand same with the results of the study of Herizi and Mahieddine (2019).

# **Conclusion**

To sum up, the results of the current study, which led us to the conclusion that the graduate level students of the universities of Gujranwala division perceive that text messaging has not only negative influences, but it has also some positive influences on the formal and academic writing of the students. They use abbreviations, acronyms and other short-forms of writing in their assignments and exams, not only due to the influence of text

messaging language, but also due to many other reasons i.e., to save their time, to be convenient and comfortable, to be quick and fast and to write their assignments and papers in a shorter way. Many students believe that text messaging is prevailing in their academic writing; but this is not the case with all students. Moreover, the most students use different text messaging types as (short forms, clippings, homophones, symbols, to spell in an informal way, pronunciation stylization, skipping apostrophes etc.) in their text messaging as well as academic language.

## **Recommendations**

Findings from this study revealed students' insights about the influence of text messaging on their academic writing skills. It was found that students perceive that text messaging has both negative and positive influences on academic writing skills. Moreover, it was also found that the students use acronyms, abbreviations and other short forms of writings due to influence of text messaging. They want to save time, to be easy and convenient, to convey message in shorter way, to be quick and fast etc. they also use non-standard English. In the view of these findings, some recommendations are given in the following which can help students to avoid adversity and negative influence of text messaging on their writing skills.

Firstly, students should not use non-standard short forms, abbreviations and acronyms that are not acceptable in standard language. Rather they should use full forms and spellings and they should only use standard forms and abbreviations that are acceptable in Standard English. This will not develop their habits to use those non-standard forms in text messaging as well as in formal writing. Secondly, students should be conscious about the spellings and grammar while writing anything. Most of the students unintentionally write incorrect grammar and spellings because they do the same mistakes in text messaging. If they are careful about spellings and grammar in academic writing, it will enhance their ability to write accurate spellings and grammar. Finally, to convey their message in a shorter and quicker way students should not use short forms and abbreviations in academic writing. This makes their assignments and papers ambiguous and the readers could not comprehend the exact meaning of those short forms and non-standard abbreviations.

#### References

- Al-Sa'di, Rami & Jihad Hamdan. (2005). Synchronous Online Chat English: Computer-mediated Communication. *World Englishes 24*. 409-424.
- Babbie, R. (2010)."Quantitative definition' http://libguides:usc.edu.
- Crystal, D. (2008). *Texting: The Gr8 Db8*. Oxford: Oxford University Press.
- Dansieh, Solomon A. (2011). SMS Texting and its Potential Impacts on Students' Written Communication Skills. In *International Journal of English Linguistics*, 1(2), 222-229.
- DeFranzo, S. E. (2011). What's the difference between qualitative and quantitative research?', Snap Surveys
- Farina, F., & Lyddy, F. (2011). The language of text messaging: "Linguistic ruin" or resource? Irish Psychologist, 37(6), 145-149.
- Janin-Starr, L. M. (2014). *An examination of texting's impact on writing* (Doctoral dissertation, Keiser University).
- Froese, A. D., Carpenter, C. N., Inman, D. A., Schooley, J. R., Barnes, R. B., Brecht, P. W., & Chacon, J. D. (2012). Effects of classroom cell phone use on expected and actual learning. *College Student Journal*, 46(2), 323-332.
- Katz, E., & Aakhus, M.A. (Eds.). (2002). Perpetual contact: Mobile communication, private talk, public performance. *Cambridge:* Cambridge University Press.
- Kim, E. (2015). WhatsApp's Insane Growth Continues: 100 Million New Users in 4 Months. *Business Insider INDIA*, 7(01).
- Herizi, A., & Mahieddine, R. (2019). *The Impact of social media on EFL students' Writing*, Doctoral dissertation, Ahmed Draia University-Adrar
- Myers, J. L., Well, A. D., & Lorch Jr, R. F. (2010). *Research design and statistical analysis* Routledge
- Arthur-Nyarko, E. (2018). Effect of the Use of Instant Messaging Applications on Writing of English as a Second Language in Higher Education. *European Journal of Education Studies*. *3*(11), 861-880
- Oluga, O. Samson & Babalola, Halira A.L. (2013). An Exploration of the Pros and Cons of the Text Message Communication System. *International Journal of Asian Social Science*. *3*(2), 334-344.
- Omar, A., & Miah, M. (2012). Impact of technology on teens' written language. *International Journal of Advanced Trends in Computer Science and Engineering*, 1(1). 9-17
- Rafi, M.S (2010). The Sociolinguistics of SMS ways to identify gender boundaries. '*Handbook of Research on Discourse, Behavior and Digital Communication*: Language Structures and social interaction' Information Science Reference, Hersley, New York.
- Russell, L. (2010). *The Effects of Text Messaging on English Grammar*. http://www.ehow.com/list\_5828172\_effects-text-messaging english-rammar.html

- Shafie, L., Darus, N., & Osman, N. (2010). SMS language and college writing: The languages of the college texters. *International Journal of Emerging Technologies in Learning (IJET)*, 5 (1), 26-31.
- Tallvid, M. (2015). 1:1 in the classroom Analysis of an educational practice in change. (PhD). University of Gothenburg, Gothenburg, Sweden.
- Odey, V. E., Essoh, N. E. G., & Endong, F. P. C. (2014). Effects of SMS texting on the writing skills of university students in Nigeria: Case of the College of Education Akamkpa. *International Journal of Linguistics and Communication*, *2*(3), 83-96.
- Vosloo, Steve (2009). *The effect of texting on literacy: Modern scourge or opportunity?* Shuttleworth Foundation.
- Wood C., Plester B., Bowyer S. (2009). Liter8 Lrnrs: Is Texting Valuable or Vandalism? *British Journal of Developmental Psychology*, *27*(1), 145-161.
- Yousaf, Zahid & Mehmood Ahmed. (2013). Effects of SMS on Writing Skills of the University Students in Pakistan (A Case of university of Gujrat). *Asian Economic and Financial Review.* 3(3), 389-397.